

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
13 January 2005 (13.01.2005)

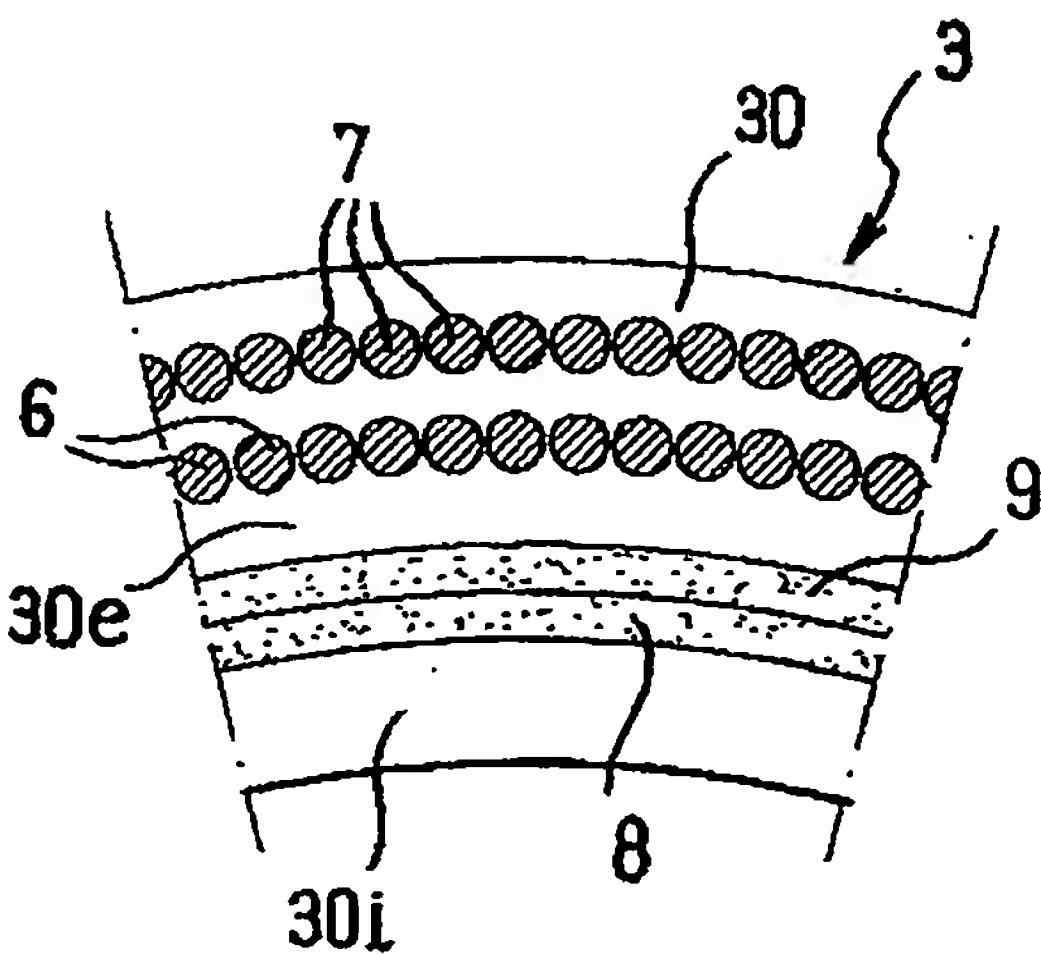
PCT

(10) International Publication Number  
WO 2005/003617 A1

(51) International Patent Classification<sup>2</sup>: F16L 55/134  
(21) International Application Number: PCT/EP2004/006240  
(22) International Filing Date: 8 June 2004 (08.06.2004)  
(25) Filing Language: English  
(26) Publication Language: English  
(30) Priority Data: 03/07455 20 June 2003 (20.06.2003) FR  
(71) Applicant (for FR only): SERVICES PETROLIERS SCHLUMBERGER [FR/FR]; 42, rue Saint Dominique, F-75007 Paris (FR).  
(71) Applicants (for AT, AU, AZ, CO, DE, DK, HR, ID, IE, IT, KP, KR, KZ, MX, NO, NZ, PH, PL, RO, RU, SK, ZA only): SCHLUMBERGER TECHNOLOGY B.V. [NL/NL]; Parkstraat 83-89, NL-2514 JG The Hague (NL). SCHLUMBERGER HOLDINGS LIMITED; P.O. Box 71, Craigmuir Chambers, Road Town, Tortola (VG).  
(71) Applicant (for CA only): SCHLUMBERGER CANADA LIMITED [CA/CA]; 525 - 3rd Avenue S.W., Calgary, Alberta T2P 0G4 (CA).  
(71) Applicant (for CN only): SCHLUMBERGER OVERSEAS S.A. [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City, Panama (PA).  
(71) Applicant (for AE, OM, SD, SY, TR only): SCHLUMBERGER OILFIELD ASSISTANCE LIMITED; Craigmuir Chambers, Road Town, Tortola (VG).  
(71) Applicant (for BR only): SCHLUMBERGER SURENCO S.A. [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City, Panama (PA).  
(71) Applicant (for TT only): SCHLUMBERGER SERVICES LIMITED; P.O. Box 438, Tortola, British Virgin Islands (VG).  
(71) Applicant (for EG only): SCHLUMBERGER SEACO INC. [PA/PA]; 8 Calle Aquilino de la Guardia, Panama City, Panama (PA).  
(71) Applicant (for CG, CM, CZ, DZ, EC, GA, GQ, IN, LT, MA, NA, NE, PG, TD, TN, VN only): PETROLEUM RESEARCH AND DEVELOPMENT NV [NL/NL]; De Ruyterkade 62, Willemstad, Curacao (AN).  
(72) Inventor; and  
(75) Inventor/Applicant (for US only): SALTEL, Jean-Louis [FR/FR]; 12, avenue de la Motte, F-35650 Le Rheu (FR).  
(74) Agent: ETUDES & PRODUCTIONS SCHLUMBERGER; 1, rue Henri Becquerel - BP 202, F-92142 Clamart Cedex (FR).  
(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

*[Continued on next page]*

(54) Title: A SEALING DEVICE FOR TEMPORARILY CLOSING A WELL OR A PIPE



(57) Abstract: The device comprises a tubular membrane (3) of circular section, having a wall (30) of material that is leakproof, flexible, and elastic, e.g. of rubber, and that is inflatable and deformable radially outwards under the action of internal fluid pressure, said membrane (3) being mechanically reinforced by at least one sheet of flexible strands (6, 7); the device is remarkable in that it includes at least one and preferably a pair of adjacent and concentric cylindrical fiber layers (8, 9) embedded in the thickness of the wall (30) inside relative to the sheet of flexible strands (6, 7), and of a structure that acts as an anti-extrusion barrier, limiting creep of the material of the wall (30) and preventing it from passing outwards between said reinforcing wires (6, 7) under the effect of the pressure generated by the inflation fluid. The device serves for temporarily closing the casing of an oil well or a variety of pipes.

WO 2005/003617 A1



(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

— *with international search report*